

Operation Instruction

of DDZY217(S22-1) Singe Phase Anti-tamper Electronic Meter

1、General

DDZY217(S22-1) Singe Phase Anti-tamper Electronic Meter is designed and made by using the advanced special chip of energy metering and the SMT manufacturing workmanship. It is with advantages of high metering accuracy, good reliability, strong overload ability, low power consumption and long lifetime, etc.. It is used for measuring the active energy in a.c. single phase circuit with the rated frequency of 50 Hz. It is with LCD display.

It meets the following standards:

IEC 62052-11:2003: Electricity metering equipment (AC) - General requirements. tests and test conditions - Part 11: Metering equipment

IEC 62053-21:2003: Electricity metering equipment (a.c.) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)

2、Specification

2.1 Specification

Specification Name	Accuracy Class	Rated voltage (V)	Current rating (A)	Constant
	Active			Active
DDZY217(S22-1) Singe Phase Anti-tamper Electronic Meter	1.0	230	5(60)A	1600imp/kWh

2.2 Outside Dimension: 218*109*55.5 mm

3、Main Technical Parameters

3.1 Basic error

Load current	Power factor	Limit of Error (%)
		For Class 1.0
$0.02I_b \leq I < 0.05I_b$	1.0	± 1.5
$0.05I_b \leq I \leq I_{max}$		± 1.0
$0.05I_b \leq I < 0.1I_b$	0.5L, 0.8C	± 1.5
$0.1I_b \leq I \leq I_{max}$		± 1.0

3.2 Power consumption

For voltage circuit: At reference voltage, reference temperature and reference frequency, the

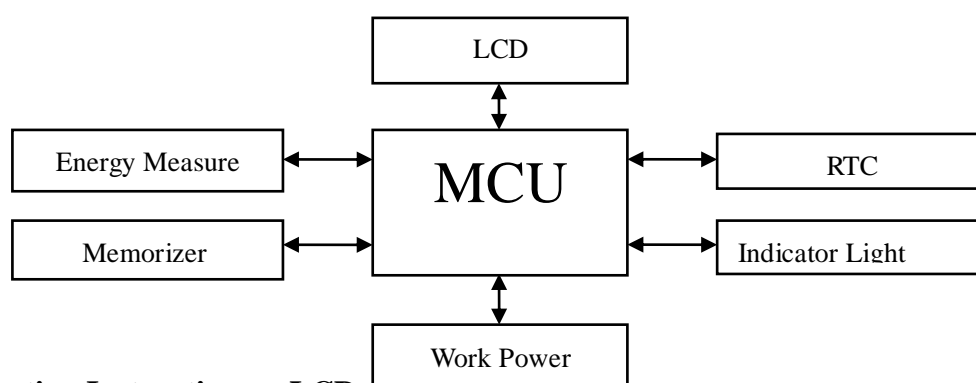
consumption of the active power and apparent power is not more than 2W and 10VA.

For current circuit: At basic current, reference temperature and reference frequency, the consumption of the apparent power in current circuit of meter is not more than 4VA.

Operating lifetime: 10 years

4 、 Working Principle

It adopts the special single phase multifunction metering chip to realize the accurate measurement of single phase a.c. active energy. The metering energy will be read by the microprocessor and stored into the non-volatile memory. The memory inside the meter adopts the non-volatile memory to guarantee the data can be saved more than 10 years after the system is power off. The diagram of working principle is as follows:



5 、 Operating Instruction on LCD

5.1 Schematic diagram of LCD Display



Schematic Diagram of LCD Display

5.2 Status indicating lamp

- Impulse LED indicating lamp: Impulse LED indicating lamp will flash one time once the energy meter measures one active metering impulse per time.
- Alarm LED indicating lamp: For indicating the alarm.

5.3 Data display

5.3.1 It is with LCD display.

5.3.2 It is with the function of auto-cyclic display. The display list is as follows:

1	Total active energy
2	Error code

If malfunction happens under auto-cyclic display mode, the LCD will display the error code immediately, then enter the cyclic mode 5S later.

5.3.3 The maximum displaying numbers for energy are 5 integrals and 2 decimals. The unit is kWh.

5.3.4 When the following conditions happen, LCD display will display the relevant code. The relevant display information is as follows:

Item Sl. No.	Error code	Error information
1	Err-01	Tamper
2	Err-56	Power is reverse.
3	Err-06	Memory fault

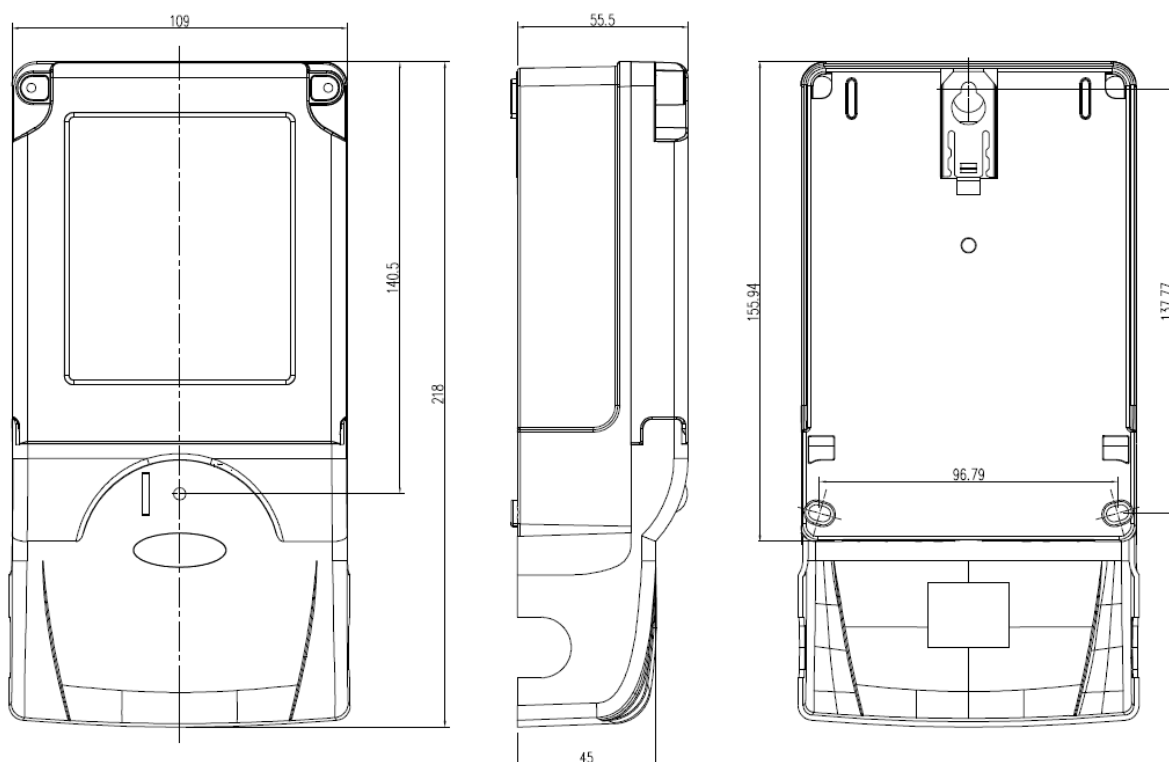
6 、 Basic Function

6.1 Measuring function

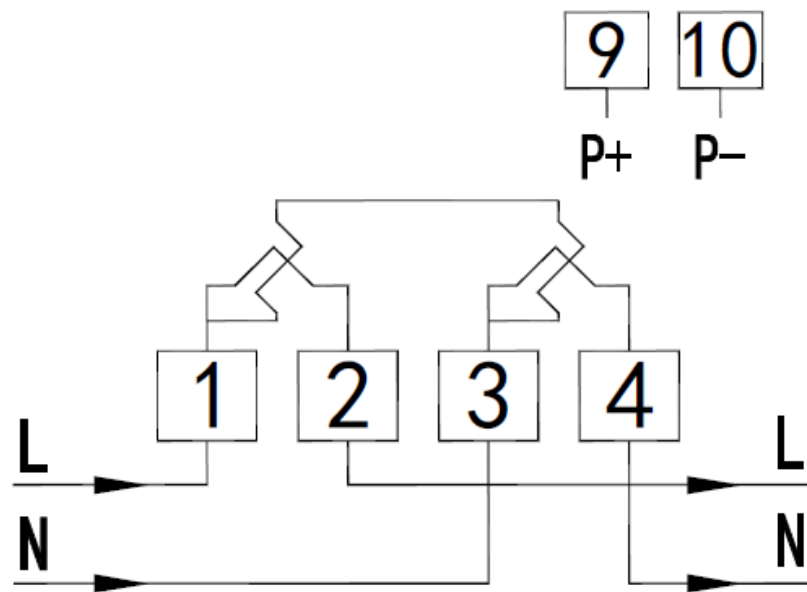
- Measuring unit: kWh(For Active Energy)
- Measuring capacity: 99999.99 kWh(For Total Active Energy)

7、 Outside Dimension Diagram and Wiring Diagram

7.1 Outside Dimension Diagram



7.2 Wiring Diagram



8. Installation

8.1 The meters shall be qualified and sealed after examination before they leave the manufactory.

8.2 The meter will be installed within the meter box for using. The mounting bottom board for the meter shall be fixed to a solid, fireproof wall. The meter is recommended to be installed in a height about 1.8 meters above sea level. In the air there does not exist corrosive gas which could damage the meter.

8.3 The meter should be wired as per the wiring diagram shown in Clause 7.2. It is better to use the copper wire or copper joint for connection.

9. Transportation and Storage

9.1 The meters shall not be shocked during the transportation and unpacking.

9.2 The meter stored should be with the original packing box, and the ambient temperature shall be $-25^{\circ}\text{C} \sim +75^{\circ}\text{C}$. The relative humidity shall not exceed 95%, in the atmosphere there does not exist substance that could corrode the meter.

9.3 The meter shall be placed on the rack and stack one on top of another for the purpose of storage in the warehouse. The stacked height of the storage of meters only with inside packing box shall not exceed 5 Pcs.

10. Warranted period

The users shall follow the operation instructions. If the meter is found not to meet the requirements within 12 months from the day that the meter left the manufactory and meter is not sealed off, the manufacturer shall repair or replace it free of charge.